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Clinical Study of Acute Abdomen In 200 Cases

Authors
Dr. Jitendra T. Sankpal[1], Dr. Vivek P. Tilwani[2], Dr. Tushar Valvi[3]
Dr. Vijay S.Nikale[4], Dr. Ashish Hatkar[5]
Corresponding Author
Dr. Jitendra T. Sankpal
Grant Medical College & Sir JJ Hospital Mumbai
Email- *drjts_palambeach@yahoo.co.in,drvptilwani@yahoo.com,surgeonviju@gmail.com*

Abstract

Present study is a hospital based prospective study done at tertiary care hospital in 200 patients presented with acute abdomen. Abdomen is considered to be magic box as a symptom complex of acute abdomen may confront surgeon paediatrician obstetrician creating a problem of urgent diagnosis and management. In this study (26.5%) involved were of 21-30 years of age group, males is to female ratio is(2.4:1),Pain in abdomen and vomiting is common presentation, with abdominal tenderness being common sign, stomach is commonly involved organ. Out of 200 patients (71%) patients managed conservatively and only (29%) patient's required emergency surgery and only 4 patients died i.e. 2% mortality.

INTRODUCTION

Patient of acute abdomen presents with an acute attack of abdominal pain that may occur suddenly or gradually over a period of several hour and presents with a symptom complex which suggests a disease that possibly is life threatening and demands an immediate or urgent diagnosis for early treatment. Abdomen is considered to be the 'MAGIC BOX' and the symptom complex of acute abdomen may confront the surgeon, paediatrician or obsteritician creating a problem of urgent diagnosis and immediate laparotomy or urgent decision for further management .This is the moment when the clinical judgement of treating surgeon helps him tide over the enigma "TO OPERATE OR NOT TO OPERATE". In emergency situations surgeon should eschew compliancy and act quickly as if his own house is on fire (Sushruta).No gift is better than the gift of life.

Stomach is commonly involved organ in acute abdominal cases .The existence of gastric

ulcerations was acknowledged by Diocles of Carystos (350B.C.), Celsus, and Galen (131-201A.D.) Guy de Chauliac described the closure of a penetrating gastric wound in 1363.The clinical recognition of the acute abdomen has been documented in literature since the time of Hipocrates. Although periodic periods reports of emergency operations for intra abdominal conditions appeared prior to middle of 18th century, however it was not until the introduction of anaesthesia that abdominal surgery became a practical therapeutic approach for patients with acute abdomen .along with this introduction of antibiotics and postoperative care made abdominal surgeries successful. Investigations like x ray abdomen erect and paracentesis played important role in management of acute abdominal cases .nowadays ultrasonography and computed tomography have very important role to play in acute abdomen

Claudius Amyand ,O surgeon to Queen Ann,King George 1 and King George 2 has performed first appendicectomy .IN 1736 ,he operated on 11 yr old boy with a scrotal hernia and fecal fistula .Within the hernia sac ,Amyand found the appendix perforated by pin .He successfully removed the appendix and repaired the hernia .

In acute abdomen the rapidity and progression of intraabdomial disease reduce the time available for making complex surgical judgement. The judgments are apt to be made in haste on limited clinical examination with consequent disastrous results. “Happy is he who has no serious consequences of his erroneous diagnosis to regret “Said Howard Marsch.

Trauma remains one of the major causes of death in our population and represents major surgical casualties .The abdomen is the third most common injured organ region with injuries requiring operation occurring in about 20% of civilian trauma victims .Motor vehicle accident ,fall from height ,assaults and industrial accidents contributes significantly ass the causes for abdominal trauma .High mortality and morbidity in abdominal trauma is due to dealy in diagnosis of visceral injury and treatment and lack of proper immediate first aid treatment and associated multisystem involvement .Early diagnosis and treatment in patients with abdominal trauma is life saving .

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AIMS AND OBJECTIVES

1. To study the incidence of various acute abdominal conditions at different age groups.
2. To study the common and uncommon presentations of acute abdomen.
3. To study the necessary investigations for the diagnosis and further management of acute abdominal conditions.
4. To study which cases to be consereved and which cases to be operated
5. To study the morbidity and mortality associated with various forms of acute abdominal conditions.

Inclusion Criteria

1. Cases presenting with acute abdomen, from surgical opd
2. Cases of all age groups, all regions and both sexes

Exclusion Criteria

1. Drugs induced gastritis, basal pneumonitis were excluded from study
2. All cases of Malignancy were excluded

RESULTS AND DISCUSSION

The present study was a hospital based prospective study done at a tertiary care Government Medical college hospital, with total 200 cases studied. IN present study most common age group affected seen in 53 cases ie.26.5% of total study population, by acute abdomen was 21-30 years., followed by age group of 11-20 and 31-40 amounting to 22% and 17.5% respectively of total study population. This is supported by Robert H. Birkhahn ,Matthew Briggs et al in whom the common age group affected with the mean of 31 years. Our study shows male predominance over females ,out of 200 ,141 patients were male and 59 were females with a ratio of 2.4 :1 .this is supportd by the study of Bashir Ahmed Soomro in 2008 in whom male to female ratio was 2.6:1.

Most common presentation in this study is pain in abdomen found in 196 patients out of 200 patients ,similar findings are noted in the study of Bashir Ahmed Soomro ,in which pain in abdomen was found in 98.7% cases. second most common symptom in our study is vomiting noted in 15 cases ie 77% of total study population .This is supported by the study of Bashir Ahmed Soomro in whom vomiting was seen in 68.96% cases, another common symptom seen is distension of abdomen seen in 28.5% ,this is supported by Afidi et al in 2008 in which distension is seen in 45% cases .The most common clinical finding in our study is tenderness found in 182 i.e. 91% ,supported Bashir Ahmed Sommoro in whom tenderness was seen in 98.27%,next most common sign found is guarding seen in 108 i.e 545 cases, this finding is supported by the study of Anupam Rajendra singh Jhobta ,Ashok kumar Atrri ,Robin Kaushik ,Rajeev Sharma and Jhobta who found guarding in 77% of cases. Rigidity found in 37 cases ie 18.5% cases .least common finding seen in 20 cases i.e.10% of study population was raised temperature.

The present study showed that most common cause of gas under diaphragm seen in 9 out of 13

cases was duodenal perforation peritonitis i.e.69.23%and gastric perforation peritonitis gas i.e.69.23% and gastric perforation peritonitis gas was seen in 4 out of 5 cases i.e.80.00% This could be because gastric perforation or larger and are located at anterior part of stomach. This sis supported by the study of Frank CY Ching GB Ong 1969, who found 91% of cases of gastric ulcer perforation having gas under diaphragm while 60% of duodenal ulcer cases have gas under diaphragm. In our study the least common cause of gas under diaphragm seen in 1 case out of 14 cases is of appendicular perforation peritonitis. This is supported by the study of Rajendra Singh Jhobta, Ashok kumar Attri, et al who found no gas under diaphragm in all cases of appendicular perforation peritonitis. In our study 142 patients i.e. 71% of total study population undergone operative management while 58 patients i.e.29% underwent conservative management. Cases conserved were that of acute pancreatitis, acute cholecystitis and blunt trauma abdomen with injuries to spleen and liver with view of preserving function of viscera. This is supported by study of Mark N. Sanders and Ian Civil et al in whom patient of blunt injury to spleen were conserved 26.6% and operated in 60.8% rest died before undergoing management.

Out of conservatively managed 58 cases most cases were of ureteric colic amounting to 31%, followed by acute cholecystitis and pancreatitis amounting to 27 and 13.7 % respectively. This is supported by study of Mohammed Gafoor, Imran Majeed et al, in whom 28.5% conservatively managed cases of ureteric colic had spontaneous passage of stone by hydrotherapy. The present study shows that most common cause of abdominal emergency seen in 63 cases was acute appendicitis i.e.44.36%. . This is supported by study of Robert H. Birkhahn, Mahethew, Bricks et al, who mentioned acute appendicitis is most common cause and operated 101 cases of appendicitis which proved to have appendicitis in 100% of cases by histopathology.

Ours study showed that most common cause of perforation peritonitis seen in 18 cases out of 41 was peptic ulcer perforation peritonitis i.e. 43.9% which includes duodenal and gastric- 13 and 5 cases each i.e. 31.7% and 12.9% each. This is correlated by study of Rajendra Singh Jhobta, Ashok kumar Attri et al who reported perforated duodenal ulcer cases in 57.34% cases. The next most common cause for perforation peritonitis seen in 14 cases out of 41 is appendicular perforation peritonitis i.e.34.14% This is correlated by study of Rajendra Singh Jhobta, Ashok kumar Attri et al who reported in their study that second most common cause for perforation peritonitis was appendicular perforation peritonitis seen in 11.70%

Our study shows that the most common cause of intestinal obstruction in 13 cases out of 29 cases i.e 44.82% is adhesions , which are due to previous surgeries like gynaecological, appendicectomy. This is supported the study ofJack R. Pickleman and Josef E. Fischer who reported 70% cases of intestinal obstruction was due to adhesions .second most common cause of

intestinal obstruction is obstructed hernia seen in 8 cases out of 29 i.e 27.82% This is supported the study of Jack R. Pickleman and Josef E. Fischer. Least common cause of intestinal obstruction in our study found is intussusception seen in 6 cases out of 29 cases i.e.20.68%this was mainly ileo-colic intussusceptions. This is supported by Stubenbord WT, Thorbajarnson B et al who reported ileo-colic intussusceptions in 15% of cases. Least common cause of obstruction is sigmoid volvulus seen in 2 cases out of 29 i.e. 6.8%.

In our study rare causes of acute abdominal surgery like imperforate anus seen in 2 cases out of 12 cases ie.16.67% who underwent emergency colostomy as preliminary procedure .This is supported by A R Robertson ,et al found that imperforate anus occurs in 1 out of 5000 live births .The present study shows other rare causes of acute abdominal surgeries like gastroschiasis, anterior abdominal wall cellulitis ,pancreatic necrosis, gangrenous cholecystitis which is seen in 8.3% cases respectively. These procedure underwent emergency surgical intervention .

Our study shows that out of trauma sustained to abdomen the common type of injury seen in 9 out of 11 cases was blunt abdominal trauma and that due to penetrating trauma. This is supported by the study Maurice E Asuquo,Okono O.Bassey et al who reported that total penetrating abdominal trauma was seen in 39% of cases and blunt trauma was seen in 61% cases .in our study most common organ injured in blunt trauma abdomen is spleen in 5 out of 13 cases i.e. 38.46%.This is supported by the study of C L Ong ,DJC Png,STF Cuan reported that spleen and liver are most common organ injured in4 % cases. Least common organ injured injured in our study was mesentry one case each .This is supported by by the study Maurice E Asuquo,Okono O.Bassey et al ,who reported one case of mesentry injury due to penetrating abdominal trauma .

Most common postoperative complication seen in our study in 12 cases out of 18 cases was wound infection i.e.66.66%.This is supported by the study of Haluk Recai Unalp, Erdinc Kamer et al ,who reported postoperative wound infection seen in 62.96%. The next most common type of complication seen in our study was fecl fistula seen in 4 out of 18 cases i.e.22.22%.This fecal fistula resulted from anastomotic leak from bowel which is anastomosed during surgery. This is supported by the study of Haulk Recai Unalp, Erdnic Kamer et al ,who reported fecal fistula in 41.97% cases.

In our study the total mortality seen in 4 cases out of 200 .ie.2%.In study by Shahida Parveen afridi about various causes of perforation peritonitis the overall mortality was 10.7% our study has less mortality rates as various cases have been studied and some are conserved and some are operated.

Table 1 Age Incidence

AGE	NO.OF CASES	PERCENTAGE
0-10	13	6.5%
11-20	44	22%
21-30	53	26.5%
31-40	35	17.5%
41-50	22	11%
51-60	19	9.5%
61-70	8	4%
71-80	5	2.5%
>80	1	0.5%
TOTAL	200	100%

Table 2 Common Symptoms

SYMPTOMS	NO .OF CASES	PERCENTAGE
PAIN IN ABDOMEN	196	98
VOMITING	154	77
DISTENSION	57	28.5
CONSTIPATION	36	18
URINARY COMPLAINTS	18	9
H/O TRAUMA	16	8

Table 3 Common Clinical Signs

SIGNS	NO.OF CASES	PERCENTAGE
TENDERNESS	182	91
GUARDING	108	54
RIGIDITY	37	18.5
FREE FLUID	33	16.5
DISTENSION OF ABDOMEN	56	28
FEBRILE	20	10
PULSE <100	60	30
100-110	30	15
>110	110	55
BOWEL SOUNDS PRESENT	142	71
BOWEL SOUNDS ABSENT	58	29

Table 4 Causes of Gas Under Diaphragm

CAUSES	TOTAL NO OF PERFORATION	TOTAL NO OF CASES	PERCENTAGE
GASTRIC PERFORATION	5	4	80.00
DUODENAL PERORATION	13	9	69.23
JEJUNAL PERFORATION	2	2	100
ILEAL PERFORATION	6	4	66.67
APPENDICULAR PERFORATION	14	1	7.1

Table 5 Management of Acute Abdomen

TYPE OF MANAGEMENT	NO.OF CASES	PERCENTAGE
CONSERVATIVE	58	29%
OPERATIVE	142	71%
TOTAL	200	100%

Table 6 Acute Abdominal Cases Managed Conservatively

CAUSES	NO.OF CASES	PERCENTAGE
APPENDICULAR MASS	4	6.8
CHOLECYSTITIS	16	27
PANCREATITIS	8	13.7
BLUNT TRAUMA ABDOMEN	6	10.3
ADHESIVE INTESTINAL OBSTRUCTION	5	8.6
URETERIC COLIC	18	31
UMBILICAL FECAL FISTULAIN KOCHS,ABDOMEN	1	1.7
TOTAL	58	100

Table 7 Different Causes of Acute Abdominal Emergencies on Exploration

CAUSES	NO.OF CASES	PERCENTAGE
PERFORATION PERITONITIS	41	28.8
ACUTE APPENDICITIS	63	44.36
ACUTE INTESTINAL OBSTRUCTION	26	18.3
MISCELLANEOUS	12	8.4
TOTAL	142	100

Table 8 Causes Of Perfforation Peritonitis

CAUSES OF PERFORATION	NO.OF CASES	PERCENTAGE
GASTRIC	5	12.19%
DUODENAL	13	31..70%
JEJUNAL	2	4.8%
ILEAL	6	14.6%
APPENDICULAR	14	34.14%
TOTAL	41	100%

Table 9 Different Causes Of Intestinal Obstruction

CAUSES	NO.OF CASES	PERCENTGE
ADHESIONS	13	44.82
OBSTRUCTED HERNIA	8	27.58
VOLVULUS	2	6.8
INTUSSUSCEPTION	6	20.68
TOTAL	29	100

Table 10 Miscellaneous Causes Of Acute Abdominal Emergencies Operated

CAUSES	NO.OF CASES	PERCENTAGE
IMPERFORATED ANUS	2	16.67
GASTROCHISIS	1	8.3
#PELVIS WITH HEAMOPERITONEUM	1	8.3
STAB INJURY WITH MESENTERIC TRAUMA	1	8.3
ANT .ABD WALL CELLULITIS	1	8.3
PERI UMBILICAL ABSCESS	1	8.3
PANCREATIC NECROSIS	1	8.3
GNGRENOUS CHOLECYSTITIS	1	8.3
BAT LIVER LACERATIONS	2	16.67
BAT SPLENIC LACEATIONS	1	8.3
TOTAL	12	100

Table 11 Incidence of Various Rgans Injured In Blunt Trauma Abdomen

ORGANS INJURED	NO.OF CASES	PERENTAGE
SPLEEN	5	38.46
LIVER	2	15.38
SMALL BOWEL	4	30.76
RENAL	1	7.7
MESENTRY	1	7.7
TOTAL	13	100

Table 12. Incidence of Post Operative Complication

TYPE OF COMPLICATION	NO.OF CASES	PERCENTAGE
WOUND INFECTION	12	66.66
WOUND DEHISCENCE	2	11.11
FECAL FISTULA	4	22.22
TOTAL	18	100

CONCLUSIONS

1) Commonlu affected age group was 21-30 years.
2) Pain in abdomen is the most common symptom while fever is the least common.
3) Tenderness was the most common clinical sign elicited in patient of acute abdomen.
4) The commonest cause of gas under diaphragm was peptic ulcer perforation peritonitis which was also the common cause of perforation peritonitis.
5) The most common case conserved among various was ureteric colic.
6) Most of the emergency exploration due to acute appendicitis.
7) Adhesive obstruction was the most common cause of intestinal obstruction.
8) The nature of injury commonly was due to blunt trauma to abdomen and spleen was the most common organ involved.
9) Miscellaneous causes of acute abdomen were imperforate anus, gastrochiasis, anterior abdominal wall cellulitis, necrotizing pancreatitis, gangrenous cholecystitis .
10) Commonest post operative complication was wound infection.
11) Beside morbidity and post operative complication mortality was comparatively less.

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